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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/842,225	LABERGE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kevin C Kianni	2877	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/1/04.
2. ☒ The allowed claim(s) is/are 157-207 and 209-215.
3. ☒ The drawings filed on 26 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

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- Acknowledgement made of applicant's canceling of claims 1-56 and 208 (previously cancelled claims included claims 1-36 and 40-42 and 44-155) in the amendment submitted on March 1, 2004.

***Reason for Allowance***

1. Claims 157-207 and 209-215 are allowed for the following reasons:

The instant application is deemed to be directed to a nonobvious improvement over the invention patented in Pat. No. (US 4,333,009). The improvement comprises as follows:

Claims 157-181 are allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious an optical system configured to project one or more control signal radiation pattern in combination with the rest of the limitations of the base claim.

Claims 182-187 are allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein each of the switching units in at least one of the first and second groups further comprises an actuator having a magnetic member coupled to move with the optical fiber and a plurality of magnetically polarizable branches spaced apart around the magnetic member in combination with the rest of the limitations of the base claim.

Claims 188-207 are allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious generating one or more output moiré interference patterns using first control signal radiation in combination with the rest of the limitations of the base claim.

Claims 209-211 are allowed because the prior art of record, taken alone or in

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combination, fails to disclose or render obvious generating one or more Moire interference patterns by projecting control signal radiation onto a reticle coupled to move with the moveable optical element in combination with the rest of the limitations of the base claim.

Claims 212-215 are allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious a plurality of moveable optical elements and wherein respective positions of the moveable optical elements influence the optical path between said first optical fiber and the one of said second optical fibers. in combination with the rest of the limitations of the base claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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**Contact Information**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

**or:**

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



K. Cyrus Kianni  
Patent Examiner  
Group Art Unit 2877

Frank Font  
Supervisory Patent Examiner  
Group Art Unit 2877

March 29, 2004